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SASSAFRAS, A MEDICINAL PLANT AND FLAVORING INGREDIENT

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Long before the arrival of white men in North America, the American Indians used a plant now known as sassafras, Sassafras albidum (Nutt.) Nees (Fig. 1) for medicinal purposes, drink, and flavoring. Early in the Colonial Period the fame of this small tree had spread far and wide. Its purported healing properties had created great demand for sassafras, particularly in Europe, and many fortune-hunting parties exported sassafras. Great fortunes never came, however, and the trade soon diminished. Yet, through the years sassafras has remained popular as a folk medicine, spring tonic, and refreshing drink where it grows naturally in the eastern United States, particularly in the South (2,4,5,7,8).

Fig. 1. Sassafrass albidum
(After West & Arnold 1956)

Sassafras over most of its range is usually a small tree up to 50 ft (15 m), but has been reported occasionally to reach heights of 90 to 100 ft (27.4-30.5 m) with at least one confirmed measurement of over 88 ft (26.9 m). In the sandy soils of peninsular Florida, it grows more commonly as a shrub rarely exceeding 10 ft (3 m) and often occurs as an understory shrub in open woods. It also grows as a shrub at the northern limits of its range. Throughout most of its range, it grows in more-or-less exposed sites along ridges and at the edges of woods as well as fencerows and abandoned fields. It is seldom cultivated, even though it makes a reasonably good ornamental.

DESCRIPTION: Leaves alternate, simple, deciduous, thin, aromatic, blades 8-13 cm long, ovate or elliptic, cuneate at base, bright green above, glabrous and glaucous below, often hairy on the veins, entire or with an additional lobe on one or both sides, often having a mitten-shaped appearance, lobes acute to obtuse; petioles about 25 mm; flowers March-April, dioecious (male and female flowers on separate trees), axillary, in racemes about 25 mm long; sepals 6, spreading, yellowish green; corolla absent; stamens in 3 groups of 3 each, the innermost glandular at base, anthers 4-celled, filaments flattened, elongate; pistillate flowers with erect columnar style, depressed stigma, and 6 sterile stamens; fruit a drupe, blue, lustrous, about 13 mm long, oblong to spherical, borne on a thickened red pedicel, pulpy; stone solitary, light brown; twigs yellowish green, later turning orange-red, mucilaginous, at first pubescent, becoming glabrous (1,3,7,8,9).

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The range of sassafras extends over most of the eastern half of the U.S. within the area from the Atlantic coast, Central Florida (Orange Co.) (9), and the Gulf coast west and north to East Texas, eastern Oklahoma, Missouri, Illinois, Michigan, extreme southern Ontario, and the southwestern tip of Maine. It grows best in well drained, fertile, sandy loam or clay loam soil, but will tolerate a wide variety of soil types. Reproduction is by root sprouts and by seed scattered mainly by birds. The fruit is consumed by at least 28 species of birds, and the leaves as well as fruit by several species of mammals.

Sassafras has long been used as a tea and spring tonic to "thin the blood and purify the system." The roots and other plant parts can be used for this purpose, but apparently the best part to use is the bark of the roots, especially after removing the outer corky layers. What is usually sold in specialty stores, though, is chipped roots including wood as well as bark. A strong brew of the hot tea has been used as a sudorific. A weaker tea, sometimes with cream and sugar, is a pleasant beverage to many. Mucilage of sassafras prepared from the roots has been used to soothe eye inflammations. Oil of sassafras, a volatile oil distilled from the roots, has been used as a flavoring material for a variety of products, including medications and soft drinks. It has also been used as an antiseptic and disinfectant. The oil is said to be narcotic in large amounts and may cause liver damage. A preparation known as gumbo-file (or -filet) made from the dried and powdered young, tender leaves was used originally by the Indians and now primarily in Creole cooking to flavor soups (2, 4,5,7,8).

Safrole, the main constituent of sassafras oil, has been shown to induce liver cancer in laboratory rats at 0.5 and 1.0% of the diet (5,6). This is a high concentration. Occasional use of small amounts of sassafras tea probably would not be harmful. At one time sassafras, carcinogenic though it is, was used in addition to surgery to treat cancer in Virginia (6). The success of such treatment was not documented and now would be considered unwise at best. Because of its carcinogenic properties, sassafras is no longer used as a flavoring for soft dirnks and other products (5,6). As a natural product it is still consumed by many southerners and by health food faddists.

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